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ABSTRACT

Attention-deficit Hyperactivity Disorder (ADHD) is the most commonly diagnosed behavior disorder among children in the United States. A frequently used and effective intervention for ADHD involves parent training for behavioral management. While parent training improves child compliance, parent-child interactions, and parenting skills, the effects of behavioral parent training on school behavior remain unclear. This study examines the effects of behavioral parent training on the behavior of ADHD children and their parents. The study sought to know whether conjoint behavioral consultation (CBC) enhanced behavioral parent training effects. Fourteen sets of parents with ADHD children participated in a 7-week behavioral parent training class. After the training class, four parent-child-teacher triads took part in follow-up CBC. All parents reported improved parental ratings of their own parenting skills as well as increased compliance in their children. Results also indicated that the addition of CBC, following behavioral parent training, resulted in further positive behavioral changes. The study draws three general conclusions: (1) behavioral parent training improves the behavior of ADHD children in the home; (2) behavioral parent training effects do not generalize to the school setting; and (3) CBC can promote generalization across settings as well as foster closer home-school collaboration and cooperation. (RJM)

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ED 376 392

Using conjoint behavioral consultation to enhance the generalization of behavioral parent training effects to school settings for children with ADHD

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Currently, Attention-deficit Hyperactivity Disorder (ADHD) is the most commonly diagnosed behavior disorder among children in the United States. One of the most frequently used and most effective interventions for ADHD is parent training in behavioral management (Anastopoulos, DuPaul, & Barkley, 1991). Available research has documented positive outcomes of parent training, including increased child compliance, improved parent-child interactions, and improved parenting skills. The effects of behavioral parent training on behavior at school, however, are less clear. The purposes of the current study were to: a) examine the effects of behavioral parent training on ADHD children's and their parents' behavior, and b) examine whether conjoint behavioral consultation enhances behavioral parent training effects. Fourteen sets of parents with ADHD children participated in a seven week behavioral parent training class (Barkley, 1987). Four parent-child-teacher triads participated in follow-up conjoint behavioral consultation (Sheridan, Kratochwill, & Bergan, 1992). Effects of behavioral parent training and conjoint behavioral consultation were examined. Behavioral parent training resulted in improved parental ratings of their own parenting skills and of their children's behavior (e.g., compliance). Results also indicate that the addition of conjoint behavioral consultation following behavioral parent training resulted in further positive behavioral changes. Implications for the school-based management of students with ADHD are discussed.

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Introduction

Currently, Attention Deficit Hyperactivity Disorder (ADHD) is the most commonly diagnosed behavior disorder among children in the United States. In addition to the primary symptoms of developmentally inappropriate degrees of inattention, impulsivity, and hyperactivity (American Psychiatric Association, 1987), many children with ADHD experience academic underachievement (Hinshaw, 1992), exhibit significant interpersonal aggression (Hinshaw, 1987), and suffer peer rejection (Whalen & Henker, 1985). These three domains of underachievement, aggression, and peer rejection are predictive of negative life outcomes (Hinshaw & Melnick, 1992). Conflictual interaction patterns also are common between children with ADHD and their parents and teachers (Cunningham & Barkley, 1979).

The pessimistic developmental course of ADHD and the negative interaction patterns that evolve with significant others suggest the necessity of implementing systemic, multimodal interventions (Hinshaw & Melnick, 1992). Numerous treatment approaches have been used to treat ADHD, including parent education and training, classroom interventions, teacher training, social skills training, and psychostimulant medication (Anastopoulos, DuPaul, & Barkley, 1991).

Behavioral parent training, which consists of teaching parents to use behavioral strategies to manage their children's behavior, is one of the most frequently used and most effective interventions for ADHD (Anastopoulos et al., 1991). Although behavioral parent training often results in behavioral improvement at home, behavioral improvement at school often does not occur. The need to develop effective methods for addressing the educational needs of

students with ADHD will become more critical in the future as schools become more likely to face increasing expectations for intervention.

Legally, students with ADHD are eligible for "reasonable accommodations" under Section 504 of the Rehabilitation Act of 1973.. "Reasonable accommodations", which can be provided in general or special education settings, may include providing a structured learning environment, employing behavior management techniques, modifying tests and assignments, and supplementing verbal instructions with visual instructions (Davila, Williams, & MacDonald, 1991).

Schools often are unaware of the legal requirements of Section 504 and are unprepared to provide these mandated interventions. Thus, it would appear prudent to investigate the use of strategies that may promote the generalization of treatment effects to school settings and facilitate the provision of "reasonable accommodations" in the general education classroom. One such approach is conjoint behavioral consultation (CBC), which involves parents and teachers working together to address the educational, social, and behavioral needs of a child for whom both parties share responsibility (Sheridan, Kratochwill, & Bergan, 1992).

The current study is a replication and extension of McMaster-Beyer (1992) who evaluated the effects of behavioral parent training and reported poor generalization to school settings. The purposes of the study were to: a) examine the effects of behavioral parent training on ADHD children's and their parents' behavior, and b) examine whether conjoint behavioral consultation (CBC) enhances behavioral parent training effects.

Method

Two groups of subjects were recruited for this study; that is, one group of parent-child dyads (N= 14) and one group of parent-teacher-child triads (N= 4) selected from the first group. All children were between 3 and 12 years of age (Mean= 8.4 yrs.). In addition, all children had been diagnosed with ADHD by a physician or psychologist and ten children were on medication for ADHD. There were nine boys and five girls.

Following parent training, four parent-teacher-child triads participated in CBC. The children whose parents and teachers participated in CBC, two boys and two girls, varied in age from 7 to 13 (Mean = 9.8 yrs.); all were on medication for ADHD.

Dependent measures for this study were organized into three groups: parent measures, teacher measures, and direct observational measures. The following measures were completed by parents during behavioral parent training: Conners' Parent Rating Scale-48 (CPRS-48) (Conners, 1989), Home Situations Questionnaire (HSQ) (Barkley, 1990), Achenbach Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1983), and Parent Practices Scale (PPS) (Strayhorn & Weidman, 1988). The CPRS-48 and HSQ also were completed during conjoint behavioral consultation (CBC). Teachers completed the following measures before and after CBC: Conners' Teacher Rating Scale-28 (CTRS-28) (Conners, 1989) and School Situations Questionnaire (SSQ) (Barkley, 1990). During CBC, three of the subjects were observed for thirty minutes twice weekly by the author; due to practical constraints (e.g., teacher preferences, scheduling problems), one of the subjects was not observed. The observer used the Public Academic Behavior in an Instructional Setting (PABIS) (Ramsey, Shinn, O'Neill,

Spira, & Walker, 1985) coding system to record the behavior of target students and comparison peers. In addition, teachers made daily observations of one specific problem behavior targeted for intervention.

The parents of fourteen children with ADHD participated in a seven week behavioral parent training class, which was co-led by a local school psychologist and the author. Ninety minute training sessions were held weekly, based on Barkley's (1987) manual and procedures. This ten step training program consists of teaching parents ways of improving attention to their child's play, compliance, and independent activity, while also teaching them effective time out and response cost procedures for addressing noncompliance and inappropriate behavior.

Handouts that explained the homework assignments and described the steps to follow in implementing the techniques, were given to parents at each session. Modeling, role-playing, and visual aids were used during the training sessions to enhance parental understanding and learning.

Sessions one and two coincided with program steps one and two, respectively, and consisted of discussions of the causes of childhood misbehavior, the etiology and treatment of ADHD, and training parents to enhance their positive attending skills through the initiation of special play time with their child. In the third session, steps three and four were combined and parents were taught to extend their positive attention to appropriate independent play and compliance as well as to give more effective commands. During the fourth session, parents were taught how to set up a home token economy (step five). In the fifth session, response cost and time out were discussed and modeled (step six). The sixth session involved instructing parents to apply time

out to additional misbehaviors (step seven) and teaching strategies for managing child misbehavior in public settings (step eight). During the seventh session, future behavior problems were identified and the management of these problems was discussed (step nine). Sessions two through seven began with a review of the homework and a discussion of successes or problems with implementing the techniques.

A booster session was held four weeks after the completion of the program. During this session, the program was reviewed and school problems were addressed.

The first parent-teacher-child triad began participating in CBC approximately sixteen weeks after the initiation of behavioral parent training. The cases reflected the implementation of some, but not all components of CBC. Meetings were held with parents and teachers in a conjoint fashion, a method of home-school communication was established, and parents and teachers worked together in addressing one of the child's problems at school. However, CBC did not include the identification of a problem behavior that the child exhibited across settings, the identification of a target behavior at home, nor the implementation of an intervention in the home.

Prior to the problem identification interview, the teacher, parent, and author met to establish the roles and responsibilities of all parties and to address the procedures of consultation, such as consultation interviews, data collection, and intervention implementation. Teachers were given handouts about ADHD and classroom interventions for ADHD.

CBC involved a four stage process for each case: a) problem identification; b) problem analysis; c) plan or treatment implementation; and d)

treatment evaluation (Sheridan, Kratochwill, & Bergan, 1992). This four stage sequence was necessary in order to progress from problem identification to intervention development and implementation. The end result of the four stage process was the evaluation of goal attainment and treatment effectiveness (Bergan & Kratochwill, 1990).

During plan implementation, the consultant briefly met with the teachers twice weekly. The consultant used these meetings to ask the teachers questions about intervention effectiveness and about the integrity of treatment implementation. The consultant also inquired about program modifications and scheduled subsequent meetings. After the treatment evaluation interview, the consultant continued to contact parents and teachers and to monitor intervention implementation.

Design

A repeated measures design was used to evaluate behavioral parent training effectiveness. A quasi-experimental single subject design was used to examine the effect of post behavioral parent training conjoint behavioral consultation (CBC) on student behavior. Quasi-experimental designs require caution in drawing conclusions about intervention effects because they usually do not control for a number of threats to internal validity. Some of the threats to internal validity can be ruled out when objective data are collected, multiple measurements are taken, information on past and future projections of performance is obtained, significant treatment outcomes are obtained, and many heterogeneous subjects are studied (Kazdin, 1982).

Many of these conditions were met in the current study. Objective data were collected on each of the cases through the use of the PABIS behavioral

observation coding system, behavioral rating scales, and direct measures of an individual target behavior in the classroom. Further, data were collected many times throughout the study.

Results

A series of one-way analyses of variance (ANOVA) for repeated measures was used to assess the behavioral parent training effects on the outcome variables (i.e., parent behavioral rating scales). Behavioral parent training resulted in statistically significant improvements in parental self ratings on the PPS and in parental ratings of their children's behavior on many of the subscales of the CBCL and CPRS-48 (see Table 1). Based on prior research (McMaster-Beyer, 1992) and present post behavioral parent training classroom observations using the PABIS coding system, behavioral parent training effects on children and youth do not appear to generalize to school settings.

Graphic displays of single subject data also were visually inspected to determine whether the effects of the interventions implemented during conjoint behavioral consultation were of practical significance. The following three characteristics were analyzed: a) changes in mean; b) changes in level; and c) latency of the change (Kazdin, 1982). Data also were analyzed to determine the percent of overlap between baseline and treatment data points.

Case 1- Shari

Shari was a nine year old second grader who exhibited the following problem behaviors: whining, lying, telling exaggerated stories, difficulty focusing and sustaining attention, disorganization, and difficulty making transitions. A series of consultation interviews was conducted with Shari's mother and teacher in order to develop an intervention to address one of these problems. During the

Table 1. Behavior rating scale means and standard deviations

Behavior Rating Scale	Pretest Mean (SD)	Posttest Mean (SD)	Follow-up Mean (SD)	F/p	Post Hoc
Parent Practice Scale	136.2 (8.9)	141.5 (8.7)	140.1 (10.7)	10.55**	Pr<Po=Fo
CPRS-48					
Conduct Problem	74.8 (10.9)	63.5 (12.7)	55.5 (7.5)	14.39***	Pr>Po=Fo
Hyperactivity Index	75.6 (14.2)	71.5 (12.4)	63.1 (17.4)	9.41**	Pr=Po>Fo
Impulsivity	67.4 (11.5)	64.8 (10.4)	57.5 (14.4)	3.02	Pr=Po=Fo
CBCL					
Social Problems	70.6 (12.8)	68.1 (11.5)	65.5 (10.7)	4.55*	Pr=Po>Fo
Attention Problems	68.6 (7.9)	65.8 (7.8)	63.8 (7.1)	6.69**	Pr=Po>Fo
Delinquent Behavior	62.6 (7.7)	60.0 (7.0)	56.7 (4.8)	1.01	Pr=Po=Fo
Aggressive Behavior	65.5 (9.3)	60.0 (8.2)	58.1 (6.5)	10.35 ***	Pr>Po=Fo
Externalizing	65.1 (7.7)	59.6 (8.8)	56.8 (8.2)	8.10**	Pr>Po=Fo
Total Score	65.3 (7.6)	60.5 (8.2)	57.2 (8.8)	11.75***	Pr>Po>Fo
HSQ					
Settings	10.1 (3.9)	8.9 (3.4)	8.7 (4.8)	0.26	Pr=Po=Fo
Severity	4.7 (1.0)	3.6 (1.9)	3.4 (1.9)	2.75	Pr=Po=Fo

Note: Pr = Pretest Mean. Po = Posttest Mean. Fo = Follow-up Mean.

* $p < .05$. ** $< .01$. *** $< .001$.

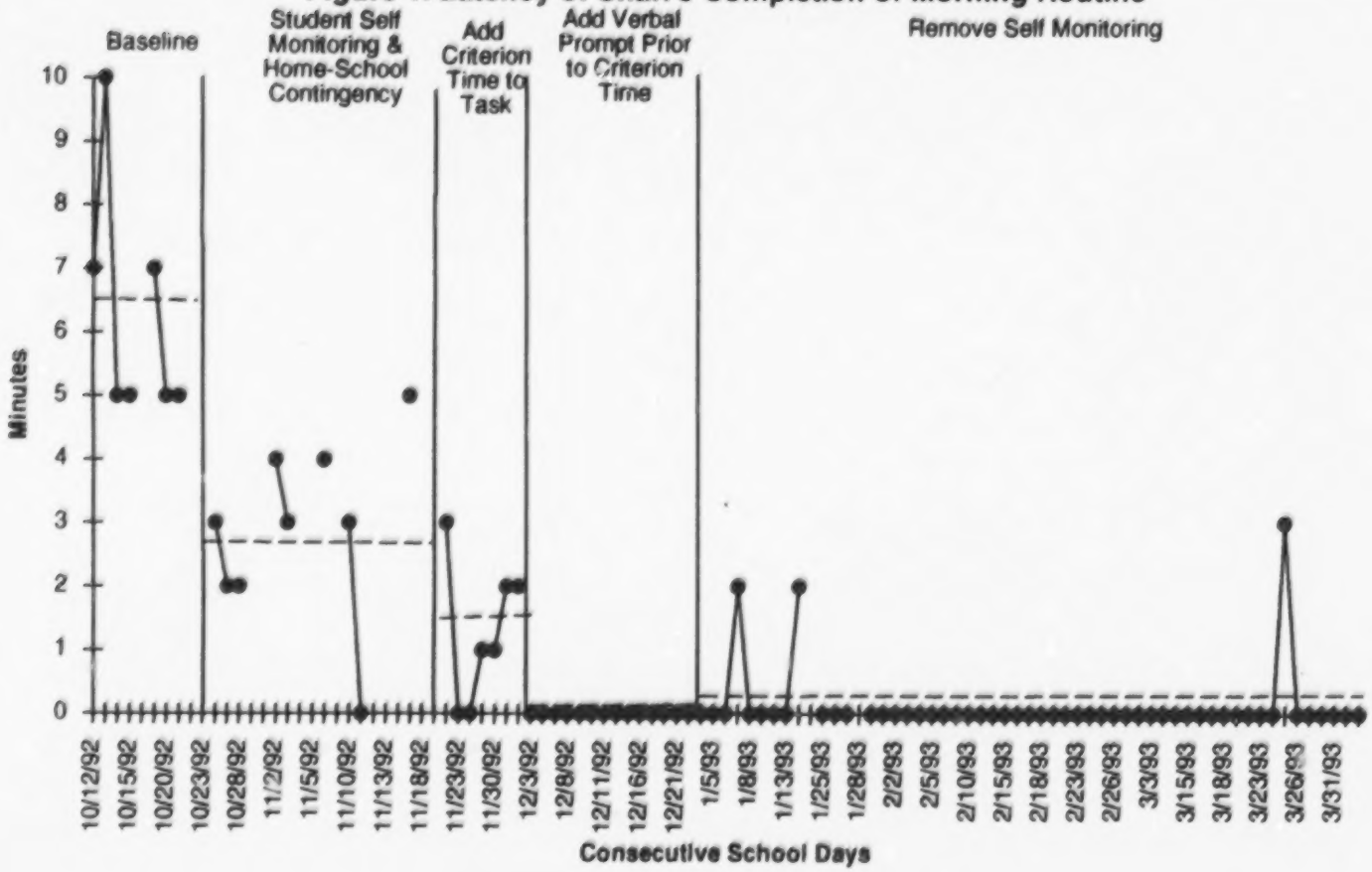
Problem Identification Interview (PII), being ready to learn by 8:45 A.M. was identified for intervention. The operational definition of being ready to learn was, "Shari will complete the morning routine and be sitting in her desk attending to the teacher by 8:45 A.M". Shari was still having problems being ready to learn on time eight weeks into the school year.

Baseline data were collected for seven days by Shari's teacher (see Figure 1). Shari was ready to learn zero out of seven days and the latency of her completion of the morning routine and readiness for learning varied from five to ten minutes. The following antecedents to Shari not being ready to learn by 8:45 A.M. were identified: Shari leaving her belongings on the bus, Shari having a problem on the bus (e.g., a fight with her sister), the teacher giving instructions to the class, and Shari reading a book. Situational conditions included: students completing the morning routine, students sitting at their desks ready to learn, and the teacher preparing for the day. Consequences for not being ready on time included: being able to engage in a pleasurable independent activity (e.g., reading), missing directions, losing points on assignments, receiving a reprimand from the teacher, and having her name written on the board.

During the Problem Analysis Interview (PAI) the baseline data were examined and an intervention was developed. The goal for intervention initially was for Shari to complete 80% of the morning routine tasks four out of five days by 8:45 A.M. The final goal was to have Shari complete all of the tasks on time every day.

The following program was implemented after the PAI: Shari, Shari's mother, and Shari's teacher constructed a checklist that Shari used daily to complete the morning routine. Shari's teacher monitored her performance,

Figure 1. Latency of Shari's Completion of Morning Routine



Note: Horizontal lines indicate means for each of the phases

praised her, and sent a note home weekly (on Fridays) regarding her performance. Shari's mother provided Shari with a special reward, such as a video or going out to eat, if Shari met the consultation goal.

The intervention was in place for seventeen days when the first Plan Evaluation Interview (PEI) was held. The latency of Shari's completion of the morning routine had decreased immediately following plan implementation; however, Shari's performance still was not satisfactory to her teacher. Therefore, the plan was changed in the following way: the checklist was revised by deleting one task (sharpen your pencil) and adding a box for completion time of 8:45. These revisions resulted in further improvements in the latency of Shari's completion of the morning routine.

Four weeks after the first PEI, a second PEI was held. At this meeting, we decided to add a verbal prompt 1 or 2 minutes prior to the criterion time to assist Shari in completing the morning routine on time. Following the inclusion of this prompt, Shari was consistently ready to learn by the criterion time for fourteen consecutive days. After Christmas vacation, Shari's teacher removed the checklist but continued to monitor Shari's performance and send feedback home for several weeks. Shari's completion of the morning routine was maintained.

Behavioral data collected across all stages of CBC for Subject 1 are presented in Figure 1. During the baseline phase, the latency of Shari's completion of the morning routine varied from 5 to 10 minutes, with a mean of 6.3 minutes. During the first treatment phase (Student Self Monitoring and Home-School Contingency), an immediate change in level from five minutes to three minutes was noted. Further, the mean latency of Shari's completion of morning routine also decreased (range 0 to 5 minutes, mean = 2.9 minutes). In addition,

only one of the data points in the first treatment phase fell within the range of baseline data points.

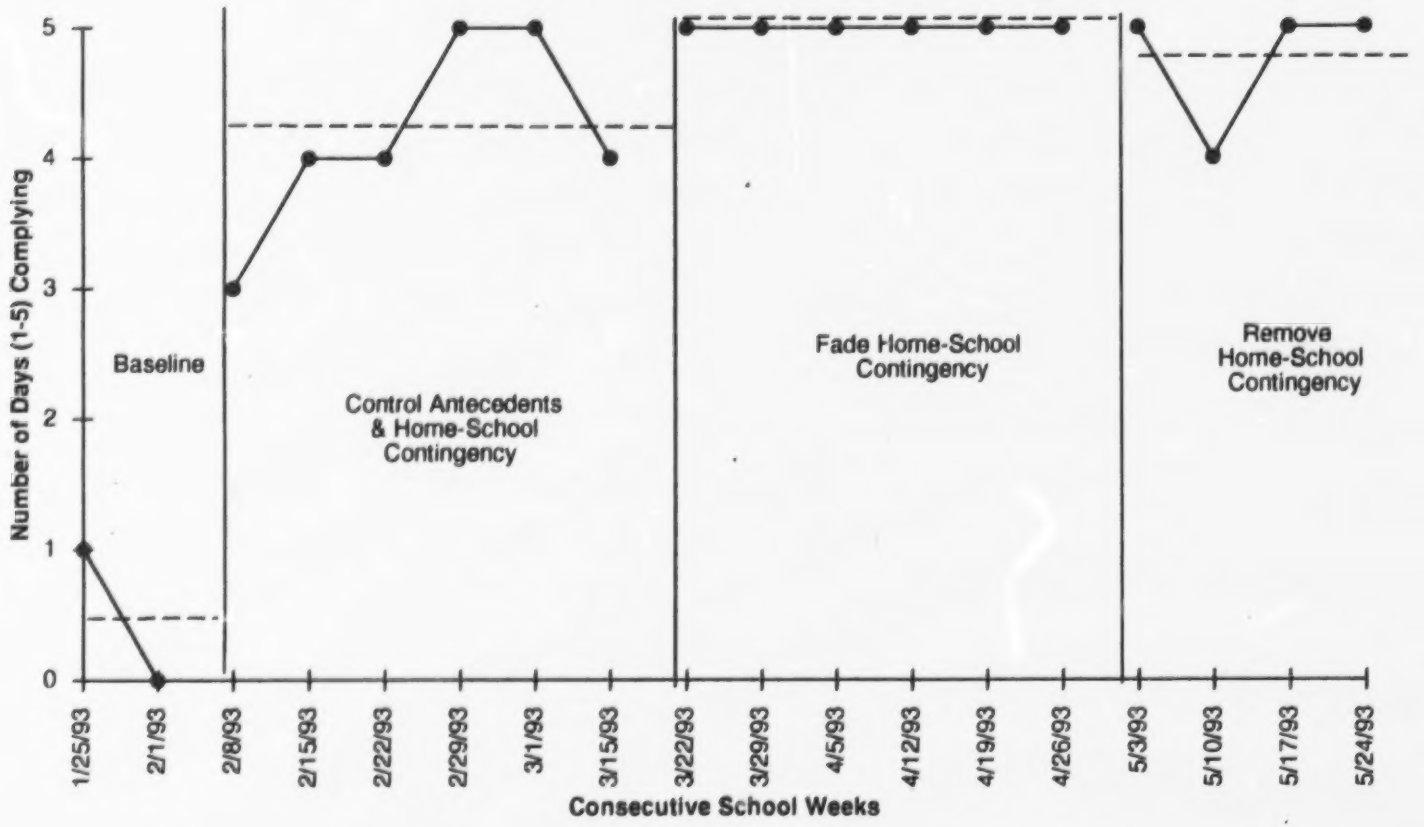
A treatment modification was instituted, which involved adding the criterion time to the checklist. Data collected over the second treatment phase indicated further improvements in Shari's completion of the morning routine (range 0 to 3 minutes, mean = 1.3). In addition, there was an immediate change in level from treatment 1 to treatment 2. The third treatment phase consisted of adding a verbal prompt 1 or 2 minutes before criterion time and resulted in Shari completing the morning routine by criterion time (mean = 0). Thus, with the implementation of the third treatment modification Shari was ready by criterion time for fourteen consecutive days. The fourth treatment phase (removal of student self monitoring) resulted in the maintenance of treatment gains (range 0 to 3, mean = .3 minutes). Based on the four criteria for visual analysis of single case graphical data, this intervention was judged to be a success.

Case 2 - Craig

Craig was a ten year old third grader who exhibited many problem behaviors including, noncompliance, aggressive behavior, difficulty focusing and sustaining attention, fidgeting, and playing with items in his desk. Also, since the beginning of the year, Craig consistently did not comply with noon wait time directions. Compliance with noon wait time directions, operationally defined as "Craig will remain seated and work on a self selected activity while waiting to go to lunch", was identified for intervention.

Baseline data were collected for ten days by Craig's teacher (see Figure 2). Craig complied with noon wait time directions only once in ten days. The following antecedents to Craig not complying with the noon wait time directions

Figure 2. Craig's Compliance with Noon Wait Time Directions



Note: Dashed horizontal lines indicate means for each of the phases

were identified: Craig's teacher repeating the noon wait time rules and then going to lunch and leaving students without direct supervision. Situational conditions included: eighteen students waiting to go to lunch and other students not following the rules. Consequences for not following directions included: being redirected by one of the hall monitors and/or sitting in the hallway during the noon wait time. The goal for intervention initially was for Craig to follow directions during the noon wait time four out of five days.

The following program was implemented: Craig's teachers reminded him about the noon time rules. Then Craig's general education teacher instructed him to go to the resource classroom teacher everyday at noon to choose an activity, such as drawing, math sheets, and other activity sheets, to work on during the noon wait. Craig was rewarded with an extra sticker on his sticker card, which was redeemable for a pop break, for following directions. His resource teacher also sent a note home to his mother every other day. Craig's mother rewarded him with special privileges at home. Craig was required to sit in the hallway when he failed to follow directions during the noon wait time.

The program resulted in an immediate change in the level of Craig's compliance during the noon wait time. During the first treatment phase, Craig complied with the rules an average of four out of five days. This was a significant improvement over baseline during which he complied an average of less than one day out of five. The second and third treatment phases (fading and then removing the home-school contingency, respectively) resulted in the maintenance of Craig's compliance during the noon wait time. Therefore, based on the four criteria of visual data analysis this intervention was a success.

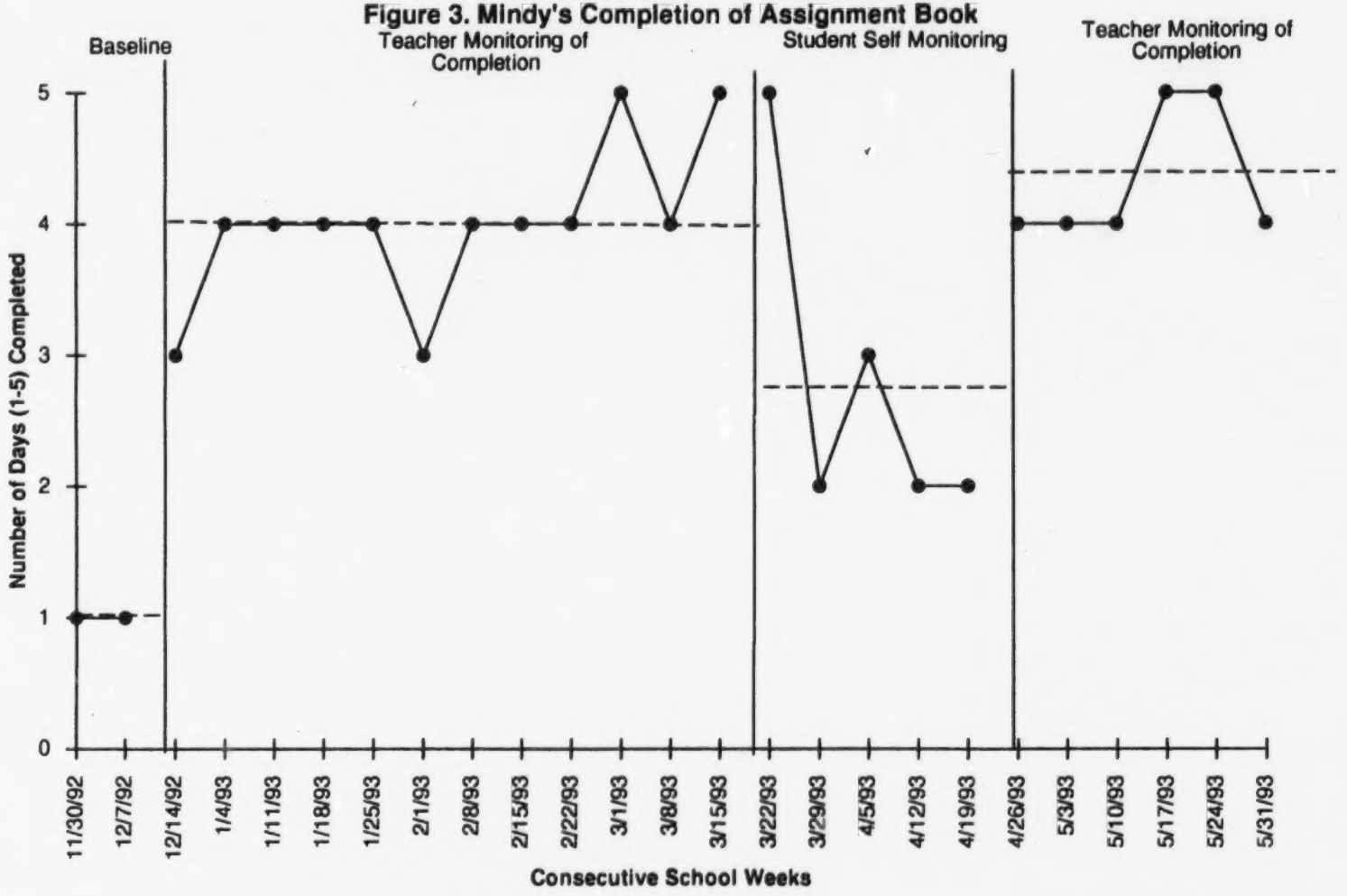
Case 3- Mindy

Mindy was a thirteen year old sixth grader who exhibited the following difficulties: disorganization, in-class assignment completion, homework completion, and assignment book completion. A series of consultation interviews was conducted with Mindy's mother and teacher in order to develop an intervention to address one of her problems. Assignment book completion, which was operationally defined as dating entries, writing down all subjects, and filling in all new assignments independently upon arrival at school, was targeted for intervention.

During the baseline phase, Mindy completed her assignment book correctly and independently only twice in ten days (see Figure 3). The following antecedents to Mindy not completing her assignment book were identified: Mindy arrives at school late, Mindy writes very slowly, and Mindy engages in other activities rather than completing the assignment book. Situational conditions included: students arriving and preparing for the start of the day, the teacher preparing for the day, and students talking. Consequences for not completing the assignment book included: Mindy's teacher and/or mother having a talk with her and Mindy staying in for recess. The goal for intervention was for Mindy to complete her assignment book accurately and independently three out of four days.

The following program was developed and implemented: Mindy was required to fill in all of the subjects and dates in the assignment book at home and fill in the assignments at school first thing in the morning. Mindy's teacher and mother monitored her progress daily. Mindy received rewards at home (e.g., watching television and playing Nintendo) after she completed her assignment

Figure 3. Mindy's Completion of Assignment Book



book and homework. At school, she had to stay in at recess if the book was not completed.

The intervention resulted in an immediate improvement in Mindy's completion of the assignment book. During the first treatment phase, Mindy completed her assignment notebook an average of four out of five days. Mindy's performance reflected such a significant improvement over baseline that we decided to have Mindy self monitor her completion of the assignment book Monday through Thursday and to have her teacher monitor her performance on Friday only.

Mindy completed her assignment book accurately during the first week that she self monitored; however, her performance deteriorated significantly over the following four weeks resulting in her teacher again monitoring her performance daily. When Mindy's teacher resumed monitoring, she returned to completing her assignment book an average of four out of five days. The teacher monitoring intervention was judged to be an effective intervention because it met the four criteria for visual analysis of single case graphical data previously indicated, specifically, there was a significant change in the mean and level of Mindy's assignment book completion; this change occurred rapidly; and there was an absence of overlapping data points between baseline and treatment phases.

Case 4 - Jay

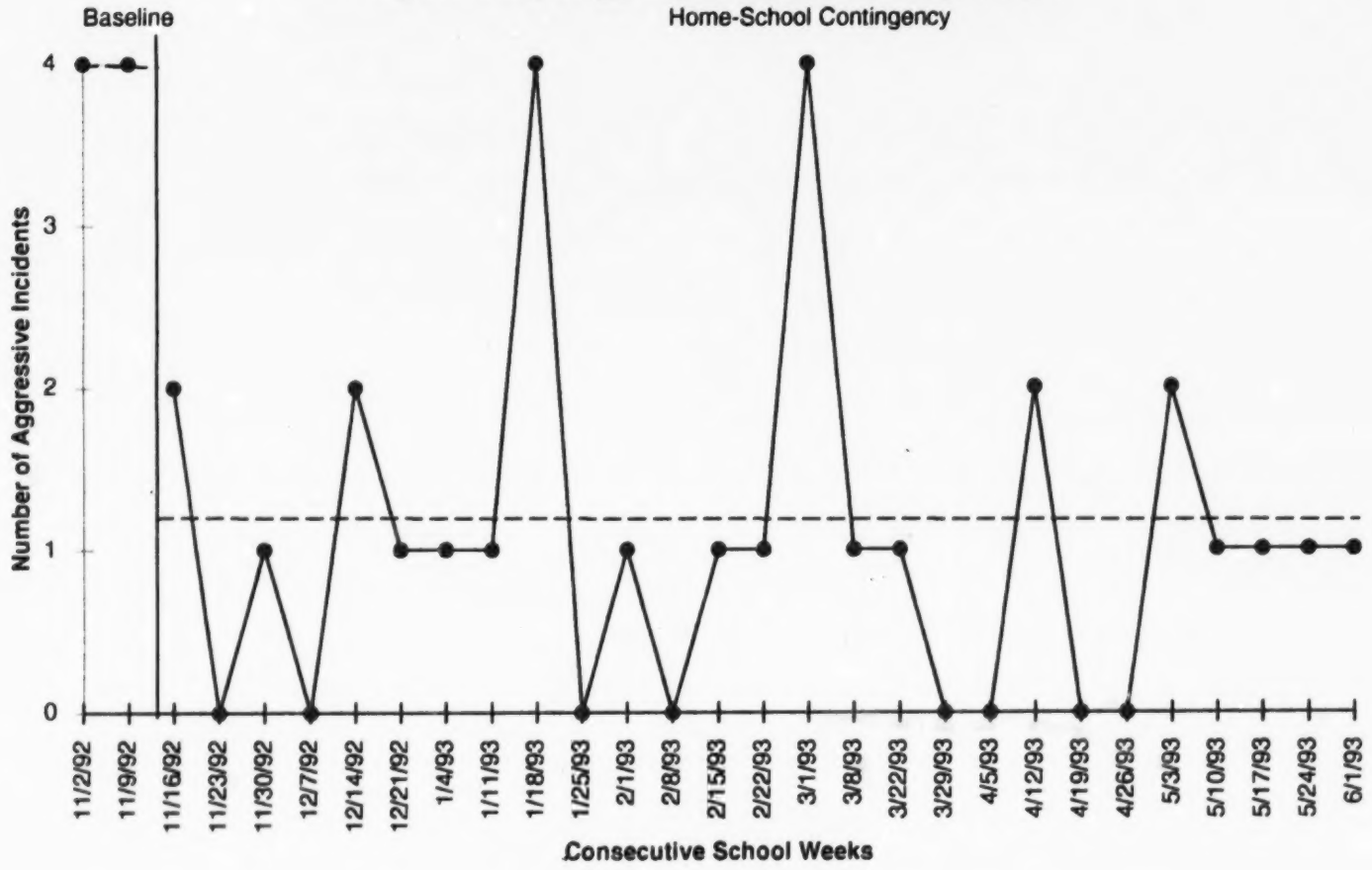
Jay was a seven year old first grader who exhibited many problem behaviors, including aggressive behavior on the playground and in the classroom, stealing, lying, difficulty completing tasks, impulsivity, and inattention. Since the beginning of the school year, aggressive behavior on the playground

had been a persistent problem for Jay. A series of consultation interviews was conducted with Jay's mother, general education teacher, and resource room teacher in order to develop an intervention to address his aggressive behavior on the playground. Aggressive behavior was operationally defined as hitting, kicking, choking (e.g., with a jump rope), pinching, pulling hair, pushing, and throwing rocks with the intention of causing physical harm to another child or adult.

During the ten day baseline collection phase, Jay engaged in four aggressive incidents per week (see Figure 4). The following antecedents to Jay's aggressive behavior were identified: talking about who he is going to kill before recess, being bumped or pushed by another student, being called a name or calling another student a name, and playing with another student with whom Jay does not get along. Situational conditions included: over a hundred children playing on the playground, other students engaging in aggressive behavior, and two playground supervisors monitoring. Consequences for engaging in aggressive behavior included: loosing privileges (e.g., recess), being reprimanded, and being sent to the principal's office. The goal for intervention was to decrease the number of aggressive incidents that Jay engaged in and to prevent the removal of recess.

A daily home-school note program was developed and implemented. This program consisted of a chart with nine squares (one for each of the periods of the day) with a happy face, a straight face, and a sad face in each square. Jay's teachers and child care provider were instructed to circle the face which best described Jay's behavior (regarding aggression) and to initial the square. The recess staff reported aggressive incidents to Jay's resource teacher who circled

Figure 4. Jay's Aggressive Behavior During Recess



Note: Dashed horizontal lines indicate means for each of the phases

the appropriate face. Jay's teachers praised Jay for not engaging in aggressive behavior and his parents provided him with rewards (e.g., cartoons, special desserts) for meeting the initial criterion of 4 out of 9 happy faces. The consequence for Jay engaging in aggressive behavior was eating lunch in the resource classroom.

The home-school contingency intervention resulted in an immediate improvement in Jay's aggressive behavior on the playground. There was an immediate change in level of performance from the baseline to intervention phases and a significant decrease in the mean number of aggressive incidents per week. However, during two weeks of the intervention the number of aggressive incidents reported were in the range of the number of incidents reported during baseline. Thus, based on the visual analysis of the data the intervention met three out of four of the criteria (i.e., latency of change, change in level, change in mean) and was partially successful.

CBC resulted in further improvements in some of the students' other classroom behaviors (e.g., attending) as measured by the PABIS coding system. Parents and teachers also reported improvements on some of the behavior rating scales during CBC.

Discussion

The current study replicated results from previous research regarding the efficacy of behavioral parent training for the parents of children with ADHD. Behavioral parent training resulted in improved parental ratings of their own parenting skills and of their children's behavior (e.g., compliance). Based on prior research (McMaster-Beyer, 1992) and present post behavioral parent training classroom observations using the PABIS coding system, behavioral parent

training effects on children and youth do not appear to generalize to school settings.

In this study, behavioral parent training and CBC were combined in an attempt to enhance the generalizability of behavioral parent training and to improve home-school cooperation. Further, it should be noted that the skills acquired during behavioral parent training may have facilitated the parents' participation in CBC. Behavioral strategies, such as time-out, positive attention, and token systems, could be applied during CBC. Behavioral parent training and CBC, however, can be separate or combined treatment packages. If CBC were used separately, more training of behavioral techniques would be necessary in order to facilitate parental participation. Moreover, as previously demonstrated, behavioral parent training used separately is unlikely to produce behavioral improvements in the school setting.

The implementation of conjoint behavioral consultation (CBC) following behavioral parent training resulted in significant and meaningful behavioral changes in school settings. The target behavior of the four students significantly improved with the implementation of interventions developed within the context of CBC. These behavioral improvements are unlikely to have occurred simply as a result of behavioral parent training; rather, they are likely to have resulted from the implementation of interventions in the school settings which directly addressed the problem behavior(s).

Other benefits resulted from the implementation of CBC. CBC resulted in the development of interventions that parents and teachers most likely would not have implemented on their own. CBC led to an increase in communication and collaboration between teachers and parents. Parents and teachers worked

together rather than separately or against each other. Further, parents and teachers shared responsibility in treatment implementation, accountability, and outcome. The overall result was effective intervention for children with ADHD.

A number of methodological factors limit the conclusions that can be reached regarding the utility of behavioral parent training and CBC based on present findings. The generalization of these findings is limited due to the small sample size and absence of a control group. Further, quasi-experimental designs preclude the demonstration of experimental control and are subject to a number of threats to internal validity, including history and maturational effects. Additional limitations of this study include: reliance on self report measures during behavioral parent training, absence of pre-parent training school data, and absence of information regarding the school performance of children whose parents participated in behavioral parent training but not CBC.

The reader is cautioned to take into account the overlap among parental dependent measures. The parental dependent measures contained some overlapping items and they measured similar constructs. This overlap among items and constructs may diminish control over Type I errors. Some of the statistically significant results may have been due to the diminished control over Type I errors.

Further, the absence of complete implementation of CBC has likely limited its effectiveness. There are many practical limitations associated with the CBC interventions that were implemented. For example, in case 1, under ideal circumstances the self monitoring condition would not have been discontinued; rather, the verbal prompt given by the teacher probably would have been removed instead. In addition, in case 2, the use of sitting in the hallway as a

punishment for inappropriate behavior may have served as a reward instead and thus not been an acceptable punishment. Further, in case 3, Mindy's failure to self monitor may have been facilitated through addition of a reward or aid which could have been faded out, rather than the immediate return to teacher monitoring. In addition, in case 4, a more powerful, skill building program would have been preferred, because some of his interactions and behaviors seemed indicative of skill deficiencies. These interventions represent compromises from ideal because of teacher preferences, time constraints, and other constraints posed in the school setting. These departures from ideal conditions more than likely reduced the overall impact of CBC. Despite these limitations, the results are suggestive of the utility of this treatment package in meeting the needs of children with ADHD in home and school settings.

The results of this study have implications for providing educational services to children with ADHD. Legally, students with ADHD are eligible for "reasonable accommodations" under Section 504 of the Rehabilitation Act of 1973. "Reasonable accommodations" for children with ADD, which can be provided in special or general education settings, may include a variety of changes in the learning environment, such as greater structure, behavior management techniques, test and assignment modification, and supplementing verbal instructions with visual instructions (Davila, Williams, & MacDonald, 1991).

Many barriers to meeting the requirements of "reasonable accommodations" for children with ADHD exist within the general education classroom (i.e., outside of special education). First, many school administrators, teachers, and parents are unaware of the legal requirements of Section 504 regarding ADHD. Many schools have not established procedures and guidelines

for identifying children in need of services, assessing children with ADHD, and providing interventions. Teachers often lack the knowledge and skills to develop, implement, and evaluate behavioral interventions and modified instructional techniques. Further, they may be resistant to providing necessary accommodations. Parents may lack communication and assertiveness skills that are needed for working with school officials. Negative parent-teacher interaction patterns, which involve blame, guilt, and anger, may have developed due to mutual frustrations of coping with the behavior problems associated with ADHD.

Despite the presence of many barriers to meeting the needs of children with ADHD and working closely with parents, schools are likely to face increasing expectations for providing interventions to students with ADHD as public awareness of legal requirements under Section 504 increase, due to the efforts of CHADD and other advocacy groups who are attempting to raise public awareness through campaigns. Support services personnel (e.g., school psychologists, school counselors) who have expertise in the areas of behavioral interventions, assessment practices, legislation (PL 94-142, Section 504, etc.), behavioral disorders, and learning disabilities are qualified to assist teachers in developing, implementing, and evaluating interventions. Further, support services personnel, due to their training and position, often act as parent advocates. A natural extension of these advocacy and supportive roles is the role of mediator. Through this mediator role, qualified support services personnel can play a key role in the provision of "reasonable accommodations" for children with ADHD in the general education classroom.

In order to mediate the provision of "reasonable accommodations", support services personnel must identify a process through which interventions

can be designed, implemented, and evaluated in school settings with parental involvement. CBC appears to be an effective avenue through which "reasonable accommodations" can be provided to children with ADHD in the general education classroom. Not only does CBC provide parents with a vehicle for ensuring services for their children, but it also provides teachers with professional and parental support and assistance in providing these services. In these consultation problem solving interviews, both teachers and parents could readily identify problem behaviors and generate possible solutions; however, prior to the initiation of consultation they did not actively implement any of these strategies. This observation provides further support for the importance of the consultant or mediator role in this process.

These results are suggestive of the following three conclusions: a) behavioral parent training results in significant improvements in the behavior of children with ADHD in the home setting, b) behavioral parent training effects do not generalize to the school setting, and c) CBC is a process that can promote generalization across settings as well as foster closer home-school collaboration and cooperation. Further, CBC appears to be an effective avenue through which "reasonable accommodations" can be designed, implemented, and evaluated.

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